

- aneurysms: role of inflammation. *J Cereb Blood Flow Metab* 2012;32:1659-76.
104. Krschek B, Kasuya H, Tajima A, Akagawa H, Sasaki T, Yoneyama T, Ujiie H, Kubo O, Bonin M, Takakura K, Hori T, Inoue I. Network-based gene expression analysis of intracranial aneurysm tissue reveals role of antigen presenting cells. *Neuroscience* 2008;154:1398-407.
 105. Ishibashi R, Aoki T, Nishimura M, Hashimoto N, Miyamoto S. Contribution of mast cells to cerebral aneurysm formation. *Curr Neurovasc Res* 2010;7:113-24.
 106. Hasan D, Chalouhi N, Jabbour P, Hashimoto T. Macrophage imbalance (M1 vs. M2) and upregulation of mast cells in wall of ruptured human cerebral aneurysms: preliminary results. *J Neuroinflammation* 2012;9:222.
 107. Hashimoto T, Meng H, Young WL. Intracranial aneurysms: links among inflammation, hemodynamics and vascular remodeling. *Neurol Res* 2006;28:372-80.
 108. Kanematsu Y, Kanematsu M, Kurihara C, Tada Y, Tsou TL, van Rooijen N, Lawton MT, Young WL, Liang EI, Nuki Y, Hashimoto T. Critical roles of macrophages in the formation of intracranial aneurysm. *Stroke* 2011;42:173-8.
 109. Ruzevick J, Jackson C, Pradilla G, Garzon-Muvdi T, Tamargo RJ. Aneurysm formation in proinflammatory, transgenic haptoglobin 2-2 mice. *Neurosurgery* 2013;72:70-6.
 110. Chyatte D, Bruno G, Desai S, Todor DR. Inflammation and intracranial aneurysms. *Neurosurgery* 1999;45:1137-46.
 111. Hasan DM, Chalouhi N, Jabbour P, Dumont AS, Kung DK, Magnotta VA, Young WL, Hashimoto T, Richard Winn H, Heistad D. Evidence that acetylsalicylic acid attenuates inflammation in the walls of human cerebral aneurysms: preliminary results. *J Am Heart Assoc* 2013;2:e000019.
 112. Hasan DM, Chalouhi N, Jabbour P, Magnotta VA, Kung DK, Young WL. Imaging aspirin effect on macrophages in the wall of human cerebral aneurysms using ferumoxytol-enhanced MRI: preliminary results. *J Neuroradiol* 2013;40:187-91.
 113. Hasan DM, Mahaney KB, Brown RD Jr, Meissner I, Piepgras DG, Huston J, Capuano AW, Torner JC; International Study of Unruptured Intracranial Aneurysms Investigators. Aspirin as a promising agent for decreasing incidence of cerebral aneurysm rupture. *Stroke* 2011;42:3156-62.
 114. Hasan D, Chalouhi N, Jabbour P, Dumont AS, Kung DK, Magnotta VA, Young WL, Hashimoto T, Winn HR, Heistad D. Early change in ferumoxytol-enhanced magnetic resonance imaging signal suggests unstable human cerebral aneurysm: a pilot study. *Stroke* 2012;43:3258-65.
 115. Nakaoka H, Tajima A, Yoneyama T, Hosomichi K, Kasuya H, Mizutani T, Inoue I. Gene expression profiling reveals distinct molecular signatures associated with the rupture of intracranial aneurysm. *Stroke* 2014;45:2239-45.

Cite this article as: Amenta PS, Valle E, Dumont AS, Medel R. Inflammation and intracranial aneurysms: mechanisms of initiation, growth, and rupture. *Neuroimmunol Neuroinflammation* 2015;2(2):68-76.

Source of Support: Nil. **Conflict of Interest:** No.

Received: 01-09-2014; **Accepted:** 11-11-2014